

## Automotive Service and Repair ITAG: Documentation of Credential and Alignment

<b>Credential Name:</b>	Introduction to Automotive Service and Repair
<b>Credential Type:</b>	<input checked="" type="checkbox"/> Certification <input type="checkbox"/> License
<b>Issuer of Credential:</b>	ASE (Automotive Service Excellence)
<b>Frequency of Updates:</b>	Every 5 years
<b>Exam(s) Required:</b>	Yes
<b>Additional Requirements:</b>	Must be current ASE Certified Master Automobile Technician (2 years verified work experience and pass ASE A-1 through A-8 exams) or ASE Automotive Maintenance and Light Repair Certified (1 year verified work experience and pass ASE G-1 exam) <a href="https://www.ase.com/test-series">https://www.ase.com/test-series</a>
<b>Current CTAG/TAG:</b> (if applicable)	CTAUT005 Introduction to Automotive Service and Repair
<b>Description of content to be evaluated and aligned:</b>	
<a href="https://www.ohiohighered.org/sites/ohiohighered.org/files/uploads/transfer/CT2/Auto_SCTAI_Align_2015.pdf">https://www.ohiohighered.org/sites/ohiohighered.org/files/uploads/transfer/CT2/Auto_SCTAI_Align_2015.pdf</a>	
<b>How long after attainment can credit be awarded?</b>	5 years
<b>How can receiving institutions verify credential attainment?</b>	1) provide copy of certification 2) send status letter email from MyASE

**Course Name:** Introduction to Automotive Service and Repair

**Credit Hours:** 2

**Course Description:** This course introduces students to the automotive service and repair industry. It also includes basic tool usage and shop safety information. The students will learn to effectively perform basic automotive preventive maintenance as well.

Postsecondary Learning Outcomes	Content from ASE A1 through A8 Tests	Content from ASE G1 Test
1. Demonstrate the ability to work safely in the automotive shop environment.	Since it is required to have 2 years verified work experience to be an ASE Master Automobile	Since it is required to have 1 year verified work experience to be ASE Automotive Maintenance and Light Repair Certified, it is implied that this

	Technician, it is implied that this work experience could count as the equivalence to this outcome.	work experience could count as the equivalence to this outcome.
2. Identify and demonstrate proper use of hand tools and equipment commonly used in the automotive service and repair industry.	Since it is required to have 2 years verified work experience to be an ASE Master Automobile Technician, it is implied that this work experience could count as the equivalence to this outcome.	Since it is required to have 1 year verified work experience to be ASE Automotive Maintenance and Light Repair Certified, it is implied that this work experience could count as the equivalence to this outcome.
3. Students will be able to list common careers in the automotive service and repair industry.	Since it is required to have 2 years verified work experience to be an ASE Master Automobile Technician, it is implied that this work experience could count as the equivalence to this outcome.	Since it is required to have 1 year verified work experience to be ASE Automotive Maintenance and Light Repair Certified, it is implied that this work experience could count as the equivalence to this outcome.
4. Identify the skills necessary to work in the automotive industry.	Since it is required to have 2 years verified work experience to be an ASE Master Automobile Technician, it is implied that this work experience could count as the equivalence to this outcome.	Since it is required to have 1 year verified work experience to be ASE Automotive Maintenance and Light Repair Certified, it is implied that this work experience could count as the equivalence to this outcome.
5. Perform an oil change on a vehicle.	Test A1 – D. Perform Lubrication and Cooling Systems Diagnosis and Repair	A. 5. Change engine oil and filter; reset oil life monitor.
6. Perform a cooling system basic inspection, flush and fill on a vehicle.	Test A1 – D. Perform Lubrication and Cooling Systems Diagnosis and Repair	A. 6. Inspect and test radiator, heater core, pressure cap, and coolant recovery system; determine needed repairs; perform cooling system pressure and dye tests. A. 10. Inspect and test coolant; drain, flush, and refill cooling system with recommended coolant; bleed air as required.
7. Perform transmission and transaxle maintenance.	Test A2 – B. In-Vehicle Transmission/Transaxle Maintenance and Repair Test A3 - B. Transmission Diagnosis and Repair, C. Transaxle Diagnosis and Repair	Content Area B. Automatic Transmission/Transaxle B. 2. Determine fluid type, level, and condition. B. 7. Replace fluid and filter(s). Content Area C. Manual Drive Train and Axles

		C. 5. Check fluid level; refill with fluid.
8. Demonstrate basic usage of a service manual and/or service information system.	Test A1, A-10. Research system operation using technical information to determine service procedures and specifications	A. 1. Verify driver's concern and/or road test vehicle; determine necessary action. Utilize service manuals, technical service bulletins (TSBs), and product information.
9. Perform tire and wheel service.	Test A3 – D. Drive Shaft/Half-Shaft and Universal Joint/Constant Velocity (CV) Joint Diagnosis (Front and Rear Wheel Drive); E. Drive Axle Diagnosis and Repair; and F. Four-Wheel Drive/All-Wheel Drive Component Diagnosis and Repair	D. 52. Inspect tire condition, tread depth, size, and application (load and speed ratings). D. 53. Check and adjust tire air pressure. Utilize vehicle tire placard and information. D. 55. Rotate tires/wheels and torque fasteners/wheel locks. D. 56. Dismount and mount tire on wheel. D. 57. Balance wheel and tire assembly. D. 58. Identify and test tire pressure monitoring systems (TPMS) (indirect and direct) for operation. Verify instrument panel lamps operation; conduct relearn procedure.
10. Perform brake system inspection.	Test A4 – D. Wheel and Tire Diagnosis and Service	E. 2. Check the master cylinder fluid level and condition; inspect for external fluid leakage. E. 8. Remove, clean, inspect, and measure brake drums; follow manufacturers' recommendations in determining need to machine or replace. E. 10. Using proper safety procedures, remove, clean, and inspect brake shoes/linings, springs, pins, self-adjusters, levers, clips, brake backing (support) plates, and other related brake hardware; determine needed repairs. E. 20. Remove, clean, and inspect pads and retaining hardware; determine needed repairs, adjustments, and replacements. E. 22. Clean, inspect, and measure rotors with a dial indicator and a micrometer; determine the need to index, machine, or replace the rotor.

<p>11. Perform starting and charging system inspection and test.</p>	<p>Test A6 – A. General Electrical/Electronic System Diagnosis; B. Battery and Starting System Diagnosis and Repair; C. Charging System Diagnosis and Repair</p>	<p>F. 2. Check voltages, grounds, and voltage drops in electrical circuits; interpret readings.  F. 3. Check current flow in electrical circuits and components; interpret readings.  F. 4. Check continuity and resistances in electrical circuits and components; interpret readings.  F. 5. Perform battery tests (load and capacitance); determine needed service.  F. 6. Maintain or restore electronic memory functions.  F. 7. Inspect, clean, fill, or replace battery.  F. 10. Jump-start a vehicle with a booster battery or auxiliary power supply  F. 11. Perform starter current draw test; interpret readings.  F. 14. Perform charging system output test and identify undercharge, no-charge, or overcharge condition.</p>
<p>12. Access onboard diagnostic system codes.</p>	<p>Test A8 – E. Computerized Engine Controls Diagnosis and Repair</p>	<p>A. 18. Retrieve and record diagnostic trouble codes (DTCs).</p>